

REMARKS

Entry of this amendment is respectfully requested.

If any fees are due to enter this amendment or to maintain pendency of this application, please charge the fees to Deposit Account No. 50-0624.

Respectfully submitted

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Cavuse
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EP000958

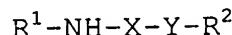
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PCT/EP 00/09587
23208P WO/WWASpu

New Claim 1

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1. A storage-stable sulfonated condensation product based on an amino resin former having at least two amino groups and sulfite and/or naphthalenesulfonic acid and also formaldehyde and, if desired, organic nitrogen bases, characterized in that it comprises at least one nitrogen-containing formulation auxiliary selected from among compounds of the formula (I)



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where

R^1 and R^2 are each, independently of one another, H, $-CH_3$, $-C_2H_5$, $-C_3H_7$ or together form $-(CH_2)_n-CH_2-$

X = $-CH_2$, CO, CS

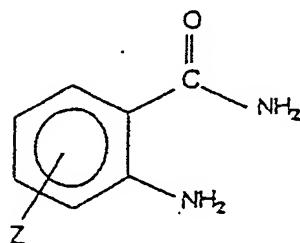
20 Y = S, NH, $-(CH_2)_m-$

n = 0 to 9

m = 1 to 4;

and/or compounds of the formula (II)

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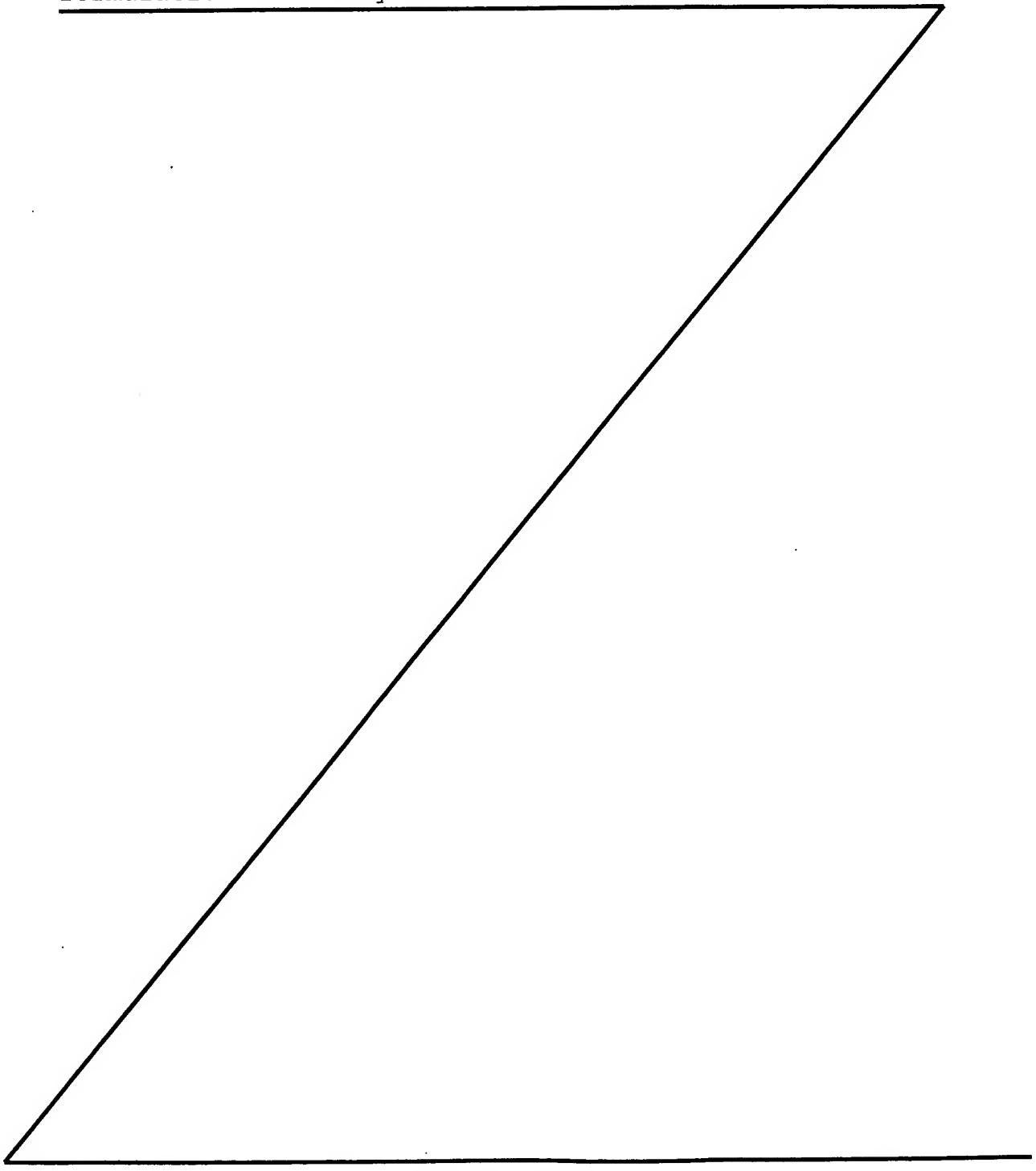
where

30 Z = $-OCH_3$, $-SO_3H$, $-SO_3^-M^+$, $-NO_2$, $-NH_2$, $-NH-NH_2$, $-CO_2^-M^+$, -CHO, H,

M = a cation

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and in that the molar ratio of amino resin former : formaldehyde : sulfite : nitrogen-containing formulation auxiliary is 1 : 1.9 - 6.0 : 1.0 - 2.0 : 0.01 - 1.5 and/or the molar ratio of naphthalene-5-sulfonic acid : formaldehyde : nitrogen-containing formulation auxiliary is 1 : 0.7 - 3.0 : 0.01 - 1.5.



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However, all these condensation products have the
disadvantage that the spray drying of aqueous solutions

AMENDED SHEET

of conventional fluidizers has an extremely adverse effect on the early strength development which is of particular importance for CaSO_4 applications due to the high thermal stress during drying.

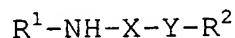
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It is therefore an object of the present invention to develop storage-stable sulfonated condensation products based on an amino resin former having at least two amino groups and sulfite and/or naphthalenesulfonic acid together with formaldehyde which when used as additives for hydraulically setting additives do not display the abovementioned disadvantage of a thermal change but are instead stable over a wide temperature range.

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According to the invention, this object is achieved by sulfonated condensation products which further comprise at least one nitrogen-containing formulation auxiliary selected from among compounds of the formula (I)

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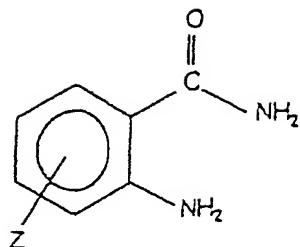


where

R^1 and R^2 are each, independently of one another, H,
25 $-\text{CH}_3$, $-\text{C}_2\text{H}_5$, $-\text{C}_3\text{H}_7$ or together form $-(\text{CH}_2)_n-\text{CH}_2-$
 $\text{X} = -\text{CH}_2$, CO, CS
 $\text{Y} = \text{S}, \text{NH}, -(\text{CH}_2)_m-$
 $n = 0$ to 9
 $m = 1$ to 4;

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and/or compounds of the formula (II)



where

Z = -OCH₃, -SO₃H, -SO₃⁻M⁺, -NO₂, -NH₂, -NH-NH₂,

5 -CO₂⁻M⁺, -CHO, H,

M = a cation, in particular Na,

and in which the molar ratio of amino resin former : formaldehyde : sulfite : nitrogen-containing formulation auxiliary is 1 : 1.9 - 6.0 : 1.0 - 2.0 : 0.01 - 1.5 and/or the molar ratio of naphthalene-sulfonic acid : formaldehyde : nitrogen-containing formulation auxiliary is 1 : 0.7 - 3.0 : 0.01 - 1.5.

15 Contrary to all expectations, it has been found that the storage-stable sulfonated condensation products of the invention display, in addition to the desired thermal stability, a drastic reduction in the undesirable outgassing of formaldehyde and/or ammonia 20 which has hitherto been typical for this class of product. This effect displayed so clearly was not foreseeable.

25 As regards the components of the storage-stable sulfonated condensation products, the invention provides for melamine and/or urea to be used as preferred amino resin formers. These can be replaced to an extent of up to 70% by weight by thiourea, dicyandiamide, a guanidine (salt) and mixtures thereof, 30 although replacement to an extent of from 30 to 50% by weight is preferred.